

Amendments to the Claims

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended) A method for host-device communication in a first Wireless Universal Serial Bus (WUSB) network including a host and at least one connected device, comprising:
 - beaconing according to a distributed Ultra WideBand Medium Access Control (UWB MAC) protocol by the host and the at least one connected device;
 - receiving ~~by the host~~ Device Notification Traffic (DNT) by the host; and
 - operating the WUSB network by the host according to the capabilities of the connected devices, wherein an offset field and a duration field in a Distributed Reservation Protocol (DRP) are set to a multiple of a predetermined value if distributed reservation is supported;
 - ~~wherein said beaconing comprising~~
 - ~~including capabilities of the host in a host beacon; and~~
 - ~~including capabilities of the at least one connected device in a connected device beacon.~~
2. (canceled)
3. (currently amended) The method of claim 12, wherein the predetermined value is 625usec.
4. (previously presented) The method of claim 1, further comprising the at least one connected device performing one of the following:
 - using Distributed Reservation Protocol (DRP) access to indicate traffic;
 - using Enhanced Distributed Channel Access (EDCA) to send notification traffic; and
 - signaling in the beacons to send notification traffic.
5. (Cancelled)

6. (previously presented) The method of claim 1, further comprising the at least one connected device discovering the host via the host beacon.

7. (previously presented) The method of claim 1, wherein the operating further comprises if the connected device supports Enhanced Distributed Channel Access (EDCA), the host performing:
 using an EDCA mechanism to access the medium;
 polling the at least one connected device to request that the at least one connected device transmit data; and
 receiving data from the at least one connected device as a result of the poll.

8. (previously presented) The method of claim 7, further comprising the at least one connected device performing one of the following:
 using Distributed Reservation Protocol (DRP) access to indicate traffic;
 using EDCA to send notification traffic; and
 signaling in the beacons to send notification traffic.

9. (previously presented) The method of claim 1, wherein the operating further comprises if the connected device supports Unicast Distributed Reservation Protocol (DRP), performing a Unicast reservation by the host performing:
 initiating a Unicast DRP reservation to the at least one device to reserve channel resources for transmission of data to the host by the at least one device;
 polling the at least one connected device during DRP to request that the at least one connected device transmit data; and
 receiving data from the at least one connected device as a result of the poll.

10. (previously presented) The method of claim 9, further comprising the at least one connected device performing one of the following:
 using DRP access to indicate traffic;
 using Enhanced Distributed Channel Access (EDCA) to send notification traffic; and
 signaling in the beacons to send notification traffic.

11. (previously presented) The method of claim 1, wherein the operating further comprises if the connected device supports Multicast Distributed Reservation Protocol (DRP), performing a Multicast reservation by the host performing:

- reserving channel resources in a first DRP reservation by inclusion of multicast DRP in beacons to achieve a first reservation;

- for each connected device that is a non-accepting device that does not accept the Multicast DRP reservation, initiating regular DRP negotiation with each non-accepting device to achieve at least one of a Unicast reservation for each non-accepting and a second DRP reservation;

- micro-scheduling the channel resources of the first and second DRP reservation among those connected devices of the at least one connected device that accept the multicast DRP reservation; and

- receiving data from the at least one connected device.

12. (previously presented) The method of claim 11, further comprising the at least one connected device performing one of the following:

- using DRP access to indicate traffic;

- using Enhanced Distributed Channel Access (EDCA) to send notification traffic; and
- signaling in the beacons to send notification traffic.

13. (previously presented) The method of claim 12, wherein the initiating regular DRP negotiation further comprises performing at least one of

- initiating a Unicast DRP reservation with a non-accepting device and

- initiating a second Multicast DRP reservation with non-accepting devices.

14. (previously presented) The method of claim 13, further comprising the at least one connected device acting as a host in a second WUSB network.

15. (previously presented) The method of claim 14, wherein the at least one connected device acting as a host of the second WUSB network performs at least some of the steps performed by the host of the first WUSB network.

16. (canceled)

17. (currently amended) The method of claim ~~11~~46, wherein the predetermined value is 625usec.

18. (canceled)

19. (canceled)

20. (Currently amended) A host apparatus for host-device communication in a first Wireless Universal Serial Bus (WUSB) network including the host and at least one connected device, comprising:

a transmitter for sending beacons, traffic notifications, medium reservations and data;

a receiver for receiving beacons, traffic notifications, medium reservations and data;

a host data transfer processing component that processes data transferred between the host and the at least one connected device; and

a controller operably coupled to the transmitter, receiver and host data transfer processing component and configured to direct the transmitter, receiver and host data transfer processing component to

start beaconing according to a distributed Ultra WideBand Medium Access Control (UWB MAC) protocol and announce host capabilities,

receive and process, according to a distributed UWB MAC protocol, beacons of the at least one connected device including capabilities of the at least one device,

receive and process Device Notification Traffic (DNT traffic), and

start and control WUSB operation of the network, wherein the controller directs the device data transfer processing component to set an offset field and a duration field in each DRP reservation to a multiple of a predetermined value if distributed reservation is supported.

21. (previously presented) The host apparatus of claim 20, wherein the controller is further configured to direct the transmitter, receiver and host data transfer processing component to:

include multicast Distributed Reservation Protocol (DRP) in beacons and then start micro-scheduling operation if multicast DRP is supported;

receive and process DNT traffic and if only unicast DRP is supported by the connected device negotiate unicast DRP with the at least one connected device and then start WUSB operation; and

receive and process DNT traffic and if only Enhanced Distributed Channel Access (EDCA) is supported by the connected device start WUSB operation with poll frame using EDCA.

22. (canceled)

23. (currently amended) The host apparatus of claim 2022, wherein the predetermined value is 625usec.

24. (previously presented) The host apparatus of claim 20, wherein when the connected device only supports Enhanced Distributed Channel Access (EDCA), the controller is further configured to control the operation of the host by directing the receiver, transmitter and host data transfer processing unit to:

use an EDCA mechanism to access the medium;

poll the at least one connected device to request that the at least one connected device transmit data; and

receive data from the at least one connected device as a result of the poll.

25. (previously presented) The host apparatus of claim 20, wherein the connected device supports Unicast DRP the controller is further configured to control the operation of the host by directing the receiver, transmitter and host data transfer processing unit to:

initiate a Unicast DRP reservation to the at least one device to reserve channel resources for transmission of data to the host by the at least one connected device;

poll the at least one connected device during DRP to request that the at least one connected device transmit data; and

receive data from the at least one connected device at a result of the poll.

26. (previously presented) The host apparatus of claim 20, wherein the at least one connected device supports multicast DRP and the controller is further configured to control the operation of the host by directing the receiver, transmitter and host data transfer processing unit to:

reserve channel resources in a first Multicast DRP reservation by inclusion of multicast DRP in beacons to achieve a first reservation;

for each said at least one connected device that is a non-accepting device that does not accept the first Multicast DRP reservation, initiate regular DRP negotiation with each non-accepting device to achieve at least one of a Unicast reservation for each non-accepting and a second DRP reservation;

micro-schedule the channel resources of the first and second DRP reservation among those connected devices of the at least one connected device that accept the multicast DRP reservation; and

receive data from the at least one connected device.

27. (Original) The host apparatus of claim 26, wherein regular DRP negotiation comprises at least one of negotiation of a Unicast DRP reservation with a non-accepting device and a second Multicast DRP reservation for non-accepting devices.

28. (currently amended) A method for host-device communication in a Wireless Universal Serial Bus (WUSB) network including a host and at least one connected device, comprising:

beaconing according to a distributed Ultra WideBand Medium Access Control (UWB MAC) protocol by the host and the at least one connected device;

the host establishing a multicast reservation between the host and the at least one connected device; and

running a WUSB protocol inside the multicast reservation, wherein an offset field and a duration field in a Distributed Reservation Protocol (DRP) are set to a multiple of a predetermined value if distributed reservation is supported;

~~wherein said beaconing comprising~~

~~including capabilities of the host in a host beacon; and~~

~~including capabilities of the at least one connected device in a connected device~~
beacon.

29. (previously presented) The method of claim 28, wherein the establishing and running each further comprise

reserving channel resources by inclusion of a multicast reservation information element in beacons to achieve a first reservation;

micro-scheduling the channel resources of the multicast reservation among those connected devices of the at least one connected device that accepted the multicast reservation; and

receiving data from the at least one connected device.

30. (previously presented) The method of claim 29, wherein the reserving further comprises:

initiating a unicast reservation with a non-accepting device; and

initiating a second multicast reservation with a plurality of non-accepting devices.

31. (canceled)

32. (currently amended) The method of claim ~~28~~³⁰, wherein the predetermined value is 625usec.

33. (previously presented) The method of claim 28, further comprising the at least one connected device performing one of the following:

using Distributed Reservation Protocol (DRP) access to indicate traffic;

using Enhanced Distributed Channel Access (EDCA) to send notification traffic; and

signaling in the beacons to send notification traffic.

34. (Cancelled)

35. (previously presented)) The method of claim 33, further comprising the at least one connected device discovering the host via a host beacon.

36. (Currently amended) A method for host-device communication in a Wireless Universal Serial Bus (WUSB) network including a host and at least one connected device, comprising:

- beaconing according to a distributed Ultra WideBand Medium Access Control (UWB) MAC protocol by the host and the at least one connected device;
- establishing unicast reservations between the host and the at least one connected device;
- and
- running a WUSB protocol inside the unicast reservations;
- ~~wherein said beaconing comprising~~
 - ~~including capabilities of the host in a host beacon; and~~
 - ~~including capabilities of the at least one connected device in a connected device beacon.~~

37. (previously presented)) The method of claim 36, wherein the establishing and running each further comprise

- the host initiating a unicast reservation to the at least one connected device to reserve channel resources for transmission of data to the host by the at least one connected device;
- the host polling the at least one connected device during the reservation to request that the connected devices transmit data; and
- the at least one connected device transmitting data to the host as a result of the poll.

38. (previously presented)) The method of claim 36, further comprising the at least one connected device performing one of the following:

- using Distributed Reservation Protocol (DRP) access to indicate traffic;
- using Enhanced Distributed Channel Access (EDCA) to send notification traffic; and
- signaling in the beacons to send notification traffic.

39. (Cancelled)

40. (previously presented) The method of claim 38, further comprising the at least one connected device discovering the host via a host beacon.

41. (Currently amended) A method for host-device communication in a Wireless Universal Serial Bus (WUSB) network including a host and at least one connected device, comprising:

beaconing according to a distributed Ultra WideBand Medium Access Control (UWB MAC) protocol by the host and the at least one connected device;

the host using an Enhanced Distributed Channel Access (EDCA) mechanism to access the medium;

the host polling the at least one connected device to request that the at least one connected device transmit data; and

the host receiving data from the at least one connected device as a result of the poll;

~~wherein said beaconing comprising~~

~~including capabilities of the host in a host beacon; and~~

~~including capabilities of the at least one connected device in a connected device~~

~~beacon.~~

42. (Cancelled)

43. (previously presented) The method of claim 41, further comprising the at least one connected device performing one of the following:

using Distributed Reservation Protocol (DRP) access to indicate traffic;

using EDCA to send notification traffic; and

signaling in the beacons to send notification traffic.

44. (cancelled)

45. (previously presented) The method of claim 43, further comprising the at least one connected device discovering the host via a host beacon.